Cotton Patch Bayou Release 2007

Thursday September 6, 2007
1630 - Phoncon
Friday September 7, 2007
Saturday September 8 2007
Sunday September 9, 2007
Monday September 10, 2007

Tuesday September 11, 2007
0800 – Ops/UC Meeting to discuss scheduled operations and update objectives.
0900 – Meeting with gypsum stack experts (Ardaman & Associates) to review memorandum issued late on the 10th regarding the condition of the gypsum stacks and their ability to withstand additional rain and wind events. Copy of the memorandum is enclosure (1).
1330 – Initial RRT meeting at Sector to brief everyone on current situation and to prepare RRT for potential future decisions/actions.
2000 - Coast Guard issued letter to Agrifos and Exxon-Mobil to prevent failure of stacks. Copy of the letter is enclosure (2).

Wednesday September 12, 2007
0700 hrs, 12 Sept. 2007 (Wed.). Based on a briefing at the Unified Command meeting by a local National Weather Service forecaster, numerous showers and thunderstorms were expected in the region for 12 Sept. Rainfall amounts were forecasted near 1 inch, with isolate accumulations of 3 to 4 inches. The chance of rain was expected to continue through 13 Sept. (Thur.) with additional rain fall of 2 to 6 inches possible.

0800 – UC meeting. NWS weather briefing indicated 1-3" rain for 12th with 6-7" over next three days. Winds estimated to be 15-20 kts from the east.
Wastewater level update given at meeting: #4 Stack leaks increased – discharging to Moat 4 but there is no evidence of gypsum in the leaks; need to reduce head pressure in the pond; an additional pump was added to the pond to reduce the level. Stack #4 appears stable but they do not want to overtop the pond. Pumping to Moat #1 continues. IMMEDIATE priorities remain: 1) Get and maintain 12" freeboard in all ponds asap; 2) Keep level in Moat #4 from overflowing; 3) Keep Moat #3 wall from failing – there is currently only 2" freeboard before overflow. Agrifos has increased monitoring to hourly on Stack #3 with constant visual inspection of the wall (roaming patrol). RP (Mr. Tim Cotton) stated that Agrifos would not intentionally pump without assurance that it would be considered criminal; they do not want to knowingly violate the law (at this point). So their strategy is to let the moats overflow rather than pump.

0900 hrs, 12 Sept. 2007. The local National Weather Service forecaster, who had just left the meeting, called the NOAA Scientific Support Coordinator to report that the disturbance in the Gulf of Mexico would soon be upgraded to a tropic depression that would threaten the area within 24 hours.

1000 – RRT meeting at Sector; Coast Guard and EPA OSCs reiterated the seriousness/criticality of current situation – facility has NO SURGE capacity at this time – without active pumping of wastewater from the top ponds and moats, catastrophic

failure of the stack(s) could occur. Weather update indicated that the tropical depression is being upgraded to a tropical storm, projected to land just west of Galveston with rain estimates of 10-15 inches in heavy bands with 30-45mph winds. EPA working to issue Agrifos a written CERCLA Order to set limitations on managing the wastewater. Some discussion ensued about which agency (CG or EPA) has lead. Captain Diehl stated that he thought EPA was lead for facility operations based on a CG-EPA MOA.
1000 hrs, 12 Sept. 2007. A Tropical Storm Warning was issued by the National Weather Service. The 1000 hrs forecast predicted that the storm would intensify to a Tropical Storm and the center of the storm would reach the Agrifos Facility at 0700 hrs, 13 Sept. Sustained tropical force winds were predicted and rainfall of 5 to 10 inches with accumulations of 15 inches was possible. The storm track, at this time, had the facility on the NE quadrant of the storm center, or on the quadrant that would receive the greatest rainfall amount, strongest winds, and possible tornados.

1130 – Meeting with Garner Services at Sector to discuss their capability to assist the situation.
1200 – Telcon between EXXON-MOBIL, D8 legal, and EPA/CG responders to discuss EXXON-MOBIL's role/responsibility in the ongoing incident. Deep Injection Well issues were also discussed. Key parties were identified and links made to discuss issues further outside of the ongoing response.

1300 hrs, 12 Sept. 2007. A Tropical Storm Warning remained in effect. The 1300 hrs report stated that the depression had intensified into Tropical Storm Humberto, and the center of the storm would still reach the Agrifos Facility at 0700 hrs, 13 Sept. Sustained tropical force winds were predicted and rainfall of 5 to 10 inches with accumulations of 15 inches was possible. The storm track, at this time, had the facility on the direct path of the storms center. Winds had intensified to 45 mph and intensification was expected. Storm surge was also expected to push tides 2 feet above normal tides for the upper Houston Ship Channel.

1500 – Planning meeting & UC meeting to discuss strategy for dealing with fast developing/moving Tropical Storm Humberto. Crisis objectives were discussed and set:

Health and safety of personnel (with approaching tropical storm)

Manage the wastewater to prevent catastrophic release of stacks. Priority is a) maintain integrity of Stack 4 and South Stack – RP is pumping and siphoning from top moats to gain freeboard to be able to keep integrity intact.

Notification of immediate neighbors of situation

Mitigate environmental damage

Assess and monitor environmental damage

Continue to identify sound disposal options for transportation, storage and disposal of wastewater (treated or untreated)

Establish claims process

RP reported that notification to neighboring facilities and downstream waterway users were made. Group reviewed IAP and made adjustments to deal with the changing weather conditions.

1700 - EPA issued CERCLA Order to Agrifos to prevent failure of stacks.
1700 – Agrifos commenced pumping. See the pump log enclosure (3).
1700 hrs, 12 Sept. 2007. The center of Tropical Storm Humberto was located 50 miles south of Galveston Texas. The storm track was drifting slightly to the west, but the winds had intensified. The new track would move the center of circulation just east of the facility. Tropical force winds were expected upwards of 60 miles for the storm's center. Intensification to hurricane status before landfall was expected.

Other references for this operational period: CG POLREP 8; IAP #5

Thursday September 13, 2007

0005 hrs, 13 Sept. 2007. Just after midnight, Hurricane Humberto, continued to shift to a more northeastern track. The EPA FOSC requested a weather update. Just after midnight, a forecaster at the Houston Office of the National Weather Service provided an update that indicated only light precipitation was expected on Thursday, and that the winds would continue to clock around to the W by daylight with winds in the 10 to 15 knots range. Friday there was a chance of afternoon showers (40-50%) but the volume was thought to be relatively light, maybe as little as one tenth of an inch. Saturday and Sunday were expected to be relatively dry with only a chance on rain.

0205 – EPA OSC told Agrifos to cease pumping from stack ponds due to change in forecasted path of Hurricane Humberto further east. Controlled release continues from South Stack moats to bring moats levels down to prevent failure of moat wall and potential uncontrolled release of 25 million gallons.
0730 – Morning operations brief. 4,113,750 gallons pumped since pumps started last night. Now have 28" freeboard on pond #2 and 18" on pond #5 of South Stack; 12" freeboard on Stack #4 pond.
0800 – UC objectives meeting. Weather outlook significantly improved because of Humberto's path eastward; however, storm could re-circulate and come back into gulf. Total water level is 13.6 million gallons lower, approximately 5 million in rain, so total release is between 17-19 million gallons overnight. Agrifos to provide a more exact number; they will also be conducting a new survey of the actual levels of the stack ponds so there may need to be a one-time adjustment made to the totals that are being tracked. EPA OSC emphasized that now that emergency (hurricane) has passed, the CERCLA Order will be the focus to get out of the critical phase (get some surge capacity to prevent catastrophic release of South Stack); emphasis will be on a more "normalized discharge" of 3-5 million gallons/day with maximum amount of gross pre-treatment possible; this release combined with maximum throughput of wastewater treatment plant will continue to work towards ending emergency.
1230 – CG/EPA released GST pump load to return to Mobile. Two GST personnel remain on scene to provide support.
1815 – CG received letter from EXXON-MOBIL in response to Coast Guard letter issued on the 11th (enclosure 2).

Other references for this operational period: CG POLREP 9; IAP #6

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Friday September 14, 2007
0730 – Operations brief
0800 – UC/General Staff meeting. Briefed on water level status; levels continue to drop; balance now 22.6 million with 27 inches freeboard in South Stack pond #2, 22.5 inches in pond #5, and 15 inches freeboard in Stack #4's pond. The 8" discharge line was secured at ~0200 but the 10" line remains discharging into the ditch from the pump station location next to moat #3. Estimated discharge amount from this line is 3.6 million gallons/day. Water sampling team is deployed to locate plume and conducted stratified sampling at outfall, downstream, and upstream. Sampling plan is developed and approved. RP's contractor, Benchmark, is engaged. Current estimated "burn" rate of wastewater is approximately 6.2 million gallons/day using the following means: 3.6 million gallons released to county ditch via 10" line; 1.2 million gallons/day processed by plant's treatment facility and discharged through permitted outfall; 800 thousand gallons used in plant fertilizer production process; and, 600 thousand gallons of naturally occurring evaporation. Process Work Group continues to examine options to use process plant's wastewater system to treat and/or turn wastewater into fertilizer product. Lime slakers have been ordered to ensure supply to plant. Wall repair is ongoing of Moat #3 – the lower the water level gets the easier it will be to access and repair.
1500 – Planning meeting. Weather update – no change in clear forecast for next 3-4 days. Repair on wall seeps (11) was completed and the wall crew continues to monitor and address other areas in additional to repair of cofferdam area.. Wastewater treatment plant was off line for 6 hours to complete tie-ins for additional treatment/process options for long-term processing of water. Movement of water from moat #4 to #1 for treatment continues.
Traffic in ship channel is helping displace plume; readings are better than previous operational/sampling period. Midday meeting with Agrifos, FOSC, and Ardaman engineers resulted in new estimate of wastewater that system needs to be reduced by to get out of critical phase; change is based on engineering estimation that 24 inches of freeboard is minimum necessary (not 30 inches as previously estimated) to give facility needed safety margin including some surge capacity in the event of a significant weather event. Original 50 million gallon estimate is now 39 million gallons; therefore, only 14.5 million gallons (not 22.6) remain to be dealt with to get out of critical emergency phase. Ardaman on-site survey is scheduled to be completed by 1200 on 15 September to verify this change.

Saturday September 15, 2007
0730 – Operations brief
0800 – UC/General Staff meeting. Weather update – regional high will remain a positive influence until Friday. JIC support is available by phone. Liaison efforts continue to notify neighbors and develop emergency notification process in the event of a catastrophic release. Water balance is now 11.4 million based on revised 39 million baseline. Ardaman is scheduled to start survey shortly. Release strategy will change significantly if survey confirms new baseline – 10" line will be secured and ponds will be rebalanced to optimize reserve within the moat/pond/stack system. Once discharge is discontinued, the adjusted "burn" rate will be approximately 2.6 million gallons/day, but the entire amount will be pretreated and released through permitted outfalls.